

CLAIMS

1. A digital communication system comprising nodes, the nodes including a central node and at least two peripheral nodes, the central node comprising all means for the communication in the system and a memory for storing information related to the system itself and/or the individual nodes, the nodes each comprising a transmitter and a receiver, and information only being directly transferred between the central node and each of the peripheral nodes, **characterized** by (control means) in the central node for transferring information stored in the memory means related to the system and/or the individual nodes to every peripheral node.
2. A digital communication system according to claim 1, **characterized** in that each peripheral node comprises means for storing said information.
3. A digital communication system according to claim 1, **characterized** in that the direct transferring of information is made wireless, in particular using short range radio waves.
4. A digital communication system according to claim 1, **characterized** in that the control means in the central node are arranged to transfer address information comprising at least one address of each of the peripheral nodes.
5. A digital communication system according to claim 1, **characterized** in that the control means in the central node are arranged to transfer compatibility related information.
6. A digital communication system according to claim 1, **characterized** in that the system is a Bluetooth piconet.

5 ⑦ A digital communication system according to claim 1,
 characterized in that a first one of the nodes is a central
 node of a first group of the nodes and a second one of the
 nodes is a central node of a second group of the nodes, the
 first and second nodes being different nodes and the nodes
 being capable of being members in both the first and second
 group, each node having first memory means for storing
 information relating to information on the first one of the
 nodes and on the nodes of the first group and second memory
 10 means for storing information relating to information on the
 second one of the nodes and on the nodes of the second group.

15 ⑧ A digital communication system according to claim 7,
 characterized in that the nodes have control units connected
 to the transmitters and receivers for transferring to a
 central node information on a change of a node to being or
 to finishing being a member in both the first and second
 groups.

20 ⑨ A method in a digital communication system comprising nodes,
 the nodes including a central node and at least two
 peripheral nodes, information only being directly transferred
 between the central node and each of the peripheral nodes,
 the central node controlling all the communication in the
 system, and information related to the system itself and/or
 the individual nodes being stored in the central node,
 25 characterized in that information related to the system
 and/or the nodes is transferred to every peripheral node.

30 —10. A method according to claim 9, **characterized** in that part of
 said information transferred to every peripheral node is
 derived from information conveyed from the peripheral nodes
 to the central node when requested by the central node.

—11. A method according to claim 9, **characterized** in that part of
 said information transferred to every peripheral node is
 derived from information conveyed from the peripheral nodes

to the central node initiated by the peripheral nodes in particular triggered by an event in the respective peripheral node.

12. A method according to claim 9, **characterized** in that said information is, entirely or in part, address information comprising an address of each of the peripheral nodes.

13. A method according to claim 9, **characterized** in that said information is, entirely or in part, compatibility related information.

14. A method according to claim 9, **characterized** in that all direct transfer of information is made wirelessly, in particular using short range radio waves.

15. A method according to claim 9, **characterized** in that the digital communication system is a Bluetooth piconet.

^{claim 9}
16. A method according to ~~any of claim 9-15~~, **characterized** in that the transferring of said information is performed using a Bluetooth broadcast mechanism.

^{claim 9}
17. A method according to ~~any of claim 9-15~~, **characterized** in that the transferring of said information is performed using the (Bluetooth unicast system) to each peripheral node in turn.

^{claim 9}
18. A method according to ~~any of claim 9-17~~, **characterized** in that the transferring of said information is made using the (Bluetooth LMP protocol).

^{claim 9}
19. A method according to ~~any of claim 9-17~~, **characterized** in that the transferring of said information is made using a protocol layer between the L2CAP and the network layer, said protocol layer emulating a shared medium network towards the network layer.

CLAIM 13
 a -20. A method according to ~~any of claim 13-19~~, **characterized** in
 that the transferring of said information is made when a new
 peripheral node joins the digital communication system.

CLAIM 13
 a 21. A method according to ~~any of claim 13-20~~, **characterized** in
 5 that, when a new peripheral node joins the system, the part
 of said information related to all the other peripheral nodes
 is transferred from the central node to said new peripheral
 node.

CLAIM 9
 a 22. A method according to ~~any of claim 9-20~~, **characterized** in
 10 that a message is transferred from the central node to all
 the peripheral nodes when one of the peripheral nodes has
 left the system.

15 (23). A method according to claim 9, wherein a first one of the
 nodes is a master node of a first group of the nodes, a
 second one of the nodes is a master node of a second group of
 the nodes, [the first and second ones of the nodes being
 different nodes and the group of first nodes and the group of
 second nodes together with the second one of the nodes having
 a node in common,] this node being a forwarding node,
 20 **characterized** in that when a node changes from being a
 forwarding node to not being a forwarding node, or vice
 versa, a message is sent to all the nodes in the first and
 second groups except the node itself.

25 (24). A method according to claim 23, **characterized** in that the
 message is sent from the master nodes of the first and second
 groups.

(25). A method according to claim 23, **characterized** in that the
 message is sent from the node itself.

30 (26). A method according to claim 23, **characterized** in that before
 sending the message, information of the change of forwarding
 node status in the node is transferred from the node to the

1. The first part of the paper is devoted to the study of the properties of the function $f(x)$ defined by the equation $f(x) = \int_0^x f(t) dt$. It is shown that $f(x)$ is a continuous function and that it satisfies the functional equation $f(x+y) = f(x) + f(y)$. The function $f(x)$ is also shown to be differentiable and its derivative is found to be $f'(x) = f(x)$. This implies that $f(x) = Ce^x$ for some constant C . The value of C is determined by the initial condition $f(0) = 1$, which gives $C = 1$. Therefore, the function $f(x)$ is $f(x) = e^x$.